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AUTHOR Blumberg, Phyllis; And Others
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ABSTRACT

Faculty and medical students' conceptions of an optimal progression toward graduation as defined by academic and psychosocial markers were compared. Twenty-four academic indicators of success or difficulty, primarily examination scores or clerkship evaluations, and 10 other indicators of progress toward graduation were assessed by 23 faculty and 43 medical students. In general, the examination-related indicators were estimated to have similar importance by the students and the faculty. Students placed their major emphasis on passing the major examinations, while faculty gave equal value to evidence of academic excellence (e.g., high scores, publishing a paper, presenting one's own research), and evidence of participation in academic or professional organizations. It is suggested that these differences probably reflect the different career orientations of the faculty and students. Greater relative importance was placed on the negative indicators than the positive ones. Three items for which the faculty responded less homogeneously than did students were "attempted suicide," "sought psychiatric help," and "sought short-term counseling." Students perceived these three indicators more negatively than did faculty. The implications for academic advising of students' career orientation and attitudes toward grades are briefly addressed. (SW)

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Phyllis Blumberg, Ph.D., Joseph A. Flaherty, M.D. and

Ann E. Morrison, A.B. University of Illinois, College of Medicine

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Reprint requests should be addressed to Phyllis Blumberg, Ph.D., Department of Psychiatry, University of Illinois - Medical Center, P.O. Box 6998, Chicago, Illinois 60680.

Medical Students and Faculty Perceptions of Importance of Academic Milestones and Markers

PHYLLIS BLUMBERG, PH.D., JOSEPH A. FLAHERTY, M.D. and ANN E. MORRISON, A.B.
University of Illinois - Medical Center

Medical students (N=43) and faculty (N=23) were asked to evaluate the relative significance of thirty-four indicators of medical student progress including positive and negative academic and psychosocial markers. Most examination-related markers were estimated similarily by the faculty and students. Significant differences were found between faculty and student perceptions on 41% of the determinants. Faculty valued these indicators more than the students did. These differences probably reflect the career orientations-academic versus practioner of the faculty and students. Greater relative importance was placed on the negative indicators than the positive ones. The implications of these findings for student advising are considered.

Faculty are routinely concerned with assessing student progress through medical school. Certain milestones, such as satisfactorily completing clerkships, are considered by the faculty as essential prerequisities for progress toward graduation. Other milestones, such as passing diagnostic examinations, while still important, are considered less essential and may more serve as a warning of future academic difficulties. Experienced faculty seem to have an intuitive notion of the relative importance of various academic and psychosocial student milestones.

Faculty assume that what they regard as important markers are equally valued by students. However, there is little evidence to show that faculty and students have similar opinions on all matters of student progress. The studies on socialization of medical students have supported the notion that student perceptions are congruent with those of the faculty on academic markers of progress toward graduation. Students believe that faculty define student success in terms of examination performance and clinical competence. Generally students accept these faculty judgments in matters of student evaluation (Becker, et. al. 1961, and Coombs, 1978).

On the other hand, faculty may perceive a certain event as being important, whereas students may not agree with the importance of this event. For example, Coombs (1978) has suggested the existence of the "test-wise" student who accepts faculty defined markers (such as passing examinations) because it is necessary to his/her survival in medical school but maintains a certain skepticism as to their actual relevance.

There appears to be less known about the congruence of faculty and student perceptions of markers which do not result in a score or a grade. Psychosocial student milestones may not be valued equally by faculty and

students. The importance attached to these psychosocial markers usually reflect values and attitudes held by the faculty. The studies on the congruence of faculty and medical student attitudes towards professional values have found a gradual assimilation of faculty values by the students as they progress through medical school (Levine, 1974 and Harris, 1974). However, Levine (1974) found that this holds true only when students are compared to faculty with similar career aspirations, i.e., academic-research vs. clinical practice.

This study compares faculty and students on their conception of an optimal progression toward graduation as defined by academic and psychosocial markers. In that respect, it is somewhat different from previous studies. The purposes of this study are to: 1. measure faculty and student perceptions of positive and negative milestones in the careers of medical students, 2. compare and contrast these perceptions in order to determine areas of congruence and dissimilarity and 3. apply these results to implcations for medical student advising.

Methodology: The authors listed all of the academic indicators of success (i.e. smooth or positive course) and of difficulty (i.e. rocky or negative course) for students at this medical school which the faculty commonly use to gage students progress, for the most part examination scores or clerkship evaluations. They also developed a list of other events or actions which might indicate a smooth or rocky course through medical school. These included psychosocial determinants such as "caught cheating on an examination" or "elected to a college committee". These lists were distributed to five additional faculty who would not be involved further with this study. These faculty made suggestions for revision, addition, or depletion of items in order to lend some validity to the lists. Items were included on the smooth-rocky course through

medical school questionnaire if majority of these faculty felt they were appropriate determinants. This smooth-rocky course through medical school questionnaire consisted of 24 common academic indicators (half positive, and half negative), and 10 common psycho-social indicators (4 positive, 4 negative, and 2 where the participants had to decide whether the event indicated a positive, neutral, or negative course through medical school). Table 1 lists each of the indicators. The participants were asked to rank each indicator on a scale from -10 to +10, with the higher the absolute number the greater the importance.

Participants: All members of the School's Committee on Student Progress (N=28) were asked to complete the questionnaire. These instructors were considered particularly aware of student milestones because the charge of this committee is to review student progress and to determine which students are at risk or not making satisfactory progress toward graduation. One half of the graduating medical students (N=97) were randomly selected and asked to participate.

Results: Twenty-three (85%) of the faculty and 43 (44%) of the students participated. Out of the 34 indicators, there were significant differences between faculty and student perceptions on 14 determinants (41%); half from the academic and half from the psycho-social indicators. (See Table 1). On 12 of these 14 significant different perceptions, the faculty thought that the indicator was more important than the students did. For example on the item, "leave of absence from school," the mean for the faculty was -5.2 and the mean for the students was -3.2.

In general the examination-related indicators were estimated as having similar importance by the students and the faculty. Out of 6 pairs of parallel rocky-smooth examination - related indicators, the students

rated the negative indicator one or more absolute number of points more than the positive indicator in each pair. An example of such a pair was National Boards Part II. The students rated failing this examination as -7.4, whereas scoring greater than +2S.D. above the mean as +5.7. In all but one case, the faculty rated the negative indicator within one absolute point of the positive indicator for each pair. There was no occurrences of students or faculty rating the positive indicator as worth more points than the parallel negative indicator. On all but three determinants, the students showed more disagreement among themselves than the faculty as evidenced by the standard deviations. The three items where the faculty were less homogeneous than the students were "attempted suicide", "sought psychiatric help", and "sought short-term counseling".

Participants were asked to determine whether 1) seeking psychiatric help and 2) seeking short-term counseling was neutral, negative or positive. The means for "sought psychiatry help" for the faculty was +0.6 and for the students -2.1. "Sought short-term counseling" resulted in a mean of +2.0 for the faculty and -1.2 for students. Responses from the faculty and the students for both indicators were significantly different.

Discussion: Although faculty and students share similar values on many items such as passing the major certifying examinations, several differences emerge which are worth discussing. Students, it seems place their major emphasis on passing these major examinations, while faculty give equal value to evidence of academic excellence (e.g. scoring greater than 2 S.D. above the mean on examinations, publishing a paper, presenting one's own research), and evidence of participation in academic or professional

organizations (college committee, student offices, etc). The faculty attitudes are hardly surprising as the faculty have chosen an academic career and probably have traditional academic values; these values also serve as standards for their own promotional process. The vase majority of the students at this medical school do not want to pursue an academic career. Faculty and administrators should be cognizant of this attitude and be aware that students are not pursuing excellence as measured by examinations. These findings illustrate why faculty advisors should get to know their advisees on a more individual basis and understand their career orientation. Future academicians should be encouraged to pursue academic excellence and engage in faculty-like tasks such as serving on committees and doing research. Advisors of future full-time practitioners should accept their advisees passing grades and strive for better clinical care and patient sensitivity which were not measured by these indicators. The students relative de-evaluation of academic excellence is remniscent of Coombs's (1978) argument that students quickly become "test-wise" when they realize that succeeding in medical school means achieving a passing score on required examinations. It is possible, however, that students have their own personal, subjective standards for success which might be related to issues of competence in handling medical emergencies or establishing patient rapport with difficult patients and other values too subtle to measure in a questionnaire survey.

The structure of medical school places greater importance on the rocky indicators compared to the smooth ones. For example, the school has established more negative than positive indicators. The faculty suggested more negative indicators that could be added to such a list than positive ones. Also, advisors and the administration pay much more attention to

students doing poorly than those doing very well. Thus, there appears to be more signs of failure or difficulty than rewards or signs of success.

The fact that students do not perceive a leave of absence as negatively as the faculty is not readily explainable. Perhaps students correctly feel that their classmates usually leave for non-academic reasons. Faculty, however, having a longitudinal perspective, are aware that many of these students take extended leave because of identity confusion or emotional problems and that they often do not return to complete their medical education.

This study shows that faculty and students have somewhat divergent opinions on almost half of these indicators of student progress through medical school. The faculty tend to value these indicators more than the students do. These differences reflect the career orientations-academic versus practitioner of the faculty and the students.

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Table 1

Ratings of Determinants of Smooth-Rocky Progressive Course Through Medical School (Scale -10 to +10)

| Determinants | Faculty | | Student | | t |
|---|---|---|---|---|---|
| 1. Academic Determinants | $\bar{X}$ | S.D. | $\bar{X}$ | S.D. | |
| A. Rocky Indicators | | | | | |
| Fail freshman certifying exam | -6.9 | 1.89 | -7.0 | 2.78 | .179 |
| Fail National Boards | -7.0 | 2.40 | -7.1 | 2.72 | .123 |
| Score major deficiency on junior diagnostic exam | -5.8 | 1.82 | -4.4 | 2.37 | 2.434* |
| Score minor deficiency on junior diagnostic exam | -3.3 | 1.64 | -2.4 | 2.03 | 1.893 |
| Fail National Boards II | -6.9 | 2.70 | -7.4 | 2.83 | .737 |
| Fail Senior Comprehensive Exam | -7.6 | 2.70 | -7.1 | 2.86 | .620 |
| Delay graduation by one year | -6.1 | 2.77 | -5.7 | 3.40 | .383 |
| Drop out for 1 year | -7.0 | 2.45 | -5.0 | 3.31 | 2.381* |
| Leave of absence from school | -5.2 | 2.47 | -3.2 | 2.94 | 2.890** |
| Below satisfactory grade on individual clerkship | -4.5 | 2.02 | -4.2 | 2.82 | .319 |
| Fail individual clerkship | -6.4 | 2.45 | -6.4 | 3.01 | .017 |
| Considered "at risk" by Progress Committee | -5.2 | 2.40 | -4.2 | 3.01 | 1.258 |
| B. Smooth Indicators | | | | | |
| Score $\geq$ +2S.D. above mean on freshman certifying exam | +6.7 | 1.84 | +6.1 | 3.05 | .443 |
| Score $\geq$ +2S.D. above mean on National Boards I | +6.0 | 2.05 | +6.8 | 2.93 | 1.133 |
| Score $\geq$ +2S.D. on junior exam | +6.2 | 2.092 | +4.4 | 2.28 | 3.033** |
| Score $\geq$ +2S.D. on National Boards II | +6.9 | 1.87 | +5.7 | 2.59 | 1.80 |
| Score $\geq$ +2S.D. on senior comprehensive exam | +7.3 | 2.20 | +5.8 | 3.06 | 2.034* |
| Above satisfactory grade on individual clerkship | +4.5 | 1.93 | +4.0 | 2.38 | .845 |
| Outstanding grade on individual clerkship | +6.2 | 2.13 | +5.7 | 2.34 | .848 |
| Nominated for scholastic award | +7.0 | 2.12 | +5.7 | 2.93 | 1.667 |
| Elected to AOA | +7.7 | 2.42 | +6.2 | 3.03 | 1.948 |
| Selected to Independent Study Program | +5.0 | 2.74 | +2.9 | 3.11 | 2.647** |
| Publish a paper | +6.3 | 2.15 | +3.6 | 2.80 | 3.800*** |
| Present a paper at a research society | +6.5 | 2.37 | +4.0 | 3.26 | 3.122*** |

| 11. Psycho-social Determinants | Faculty | | Student | | t |
|---|---|---|---|---|---|
| A. Rocky Indicators | $\bar{X}$ | S.D. | $\bar{X}$ | S.D. | |
| Caught cheating on any exam | -7.6 | 2.52 | -7.7 | 2.96 | .148 |
| Attempted suicide | -8.1 | 2.52 | -8.8 | 2.28 | .926 |
| Subject of disciplinary action/ discussion | -6.4 | 2.37 | -6.1 | 3.15 | .427 |
| Negative comments about inter-personal behavior in clerkship evaluation | -5.0 | 2.01 | -4.3 | 2.77 | 1.121 |
| B. Smooth Indicators | | | | | |
| Elected to college committee | +3.7 | 1.87 | +2.4 | 2.45 | 2.167* |
| Nominated for civil service award | +5.0 | 2.32 | +3.0 | 2.65 | 2.842** |
| Elected officer of student organization | +4.4 | 1.99 | +2.8 | 2.71 | 2.417** |
| Member of Student Association or organization | +3.5 | 2.06 | +1.9 | 2.30 | 2.613** |
| C. Participants were asked to determine whether positive, negative or neutral | | | | | |
| Sought psychiatric help | +0.6 | 4.71 | -2.1 | 3.45 | 2.379* |
| Sought short-term counselling | +2.0 | 3.36 | -1.2 | 2.91 | 3.568*** |

KEY

* = Significance at the $p < .05$ level

** = Significance at the $p < .01$ level

*** = Significance at the $p < .001$ level